

6. Sketch each inequality.

a. $y \leq -3 + x$

b. $y > -2 - 1.5x$

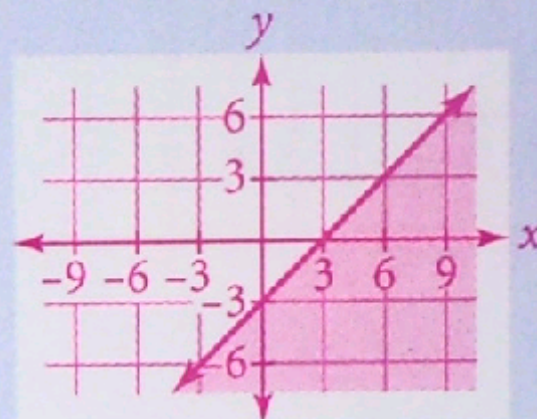
c. $2x - y \geq 4$

$-2x$ $-2x$

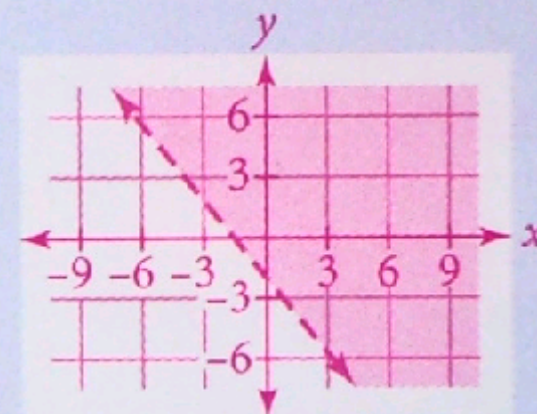
$$\frac{-y}{-1} \geq \frac{4-2x}{-1}$$

$$y \leq -4 + 2x$$

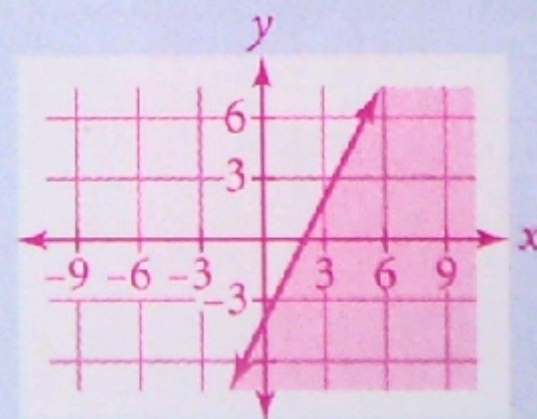
6a.

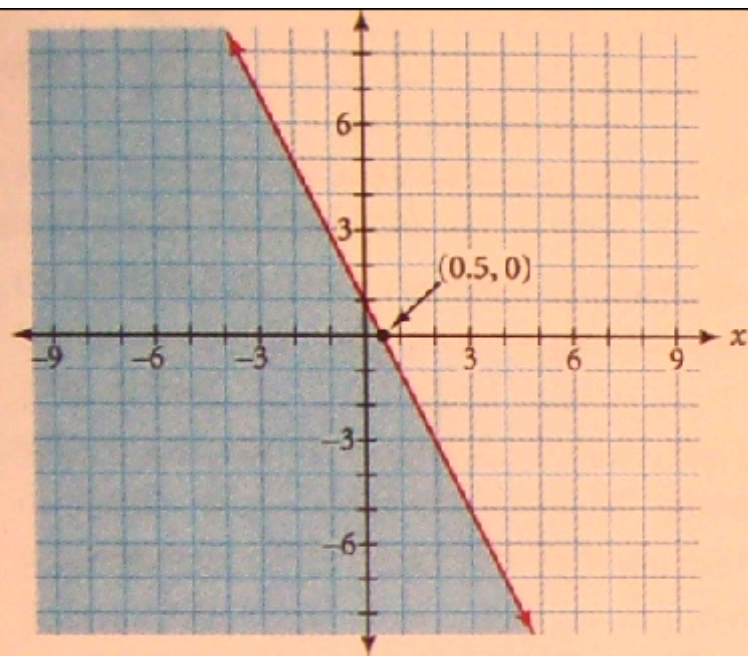


6b.

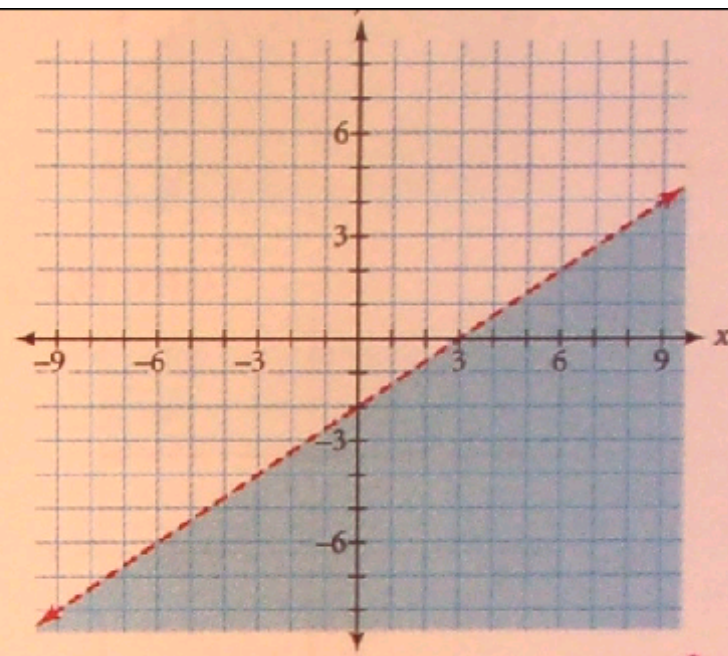


6c.



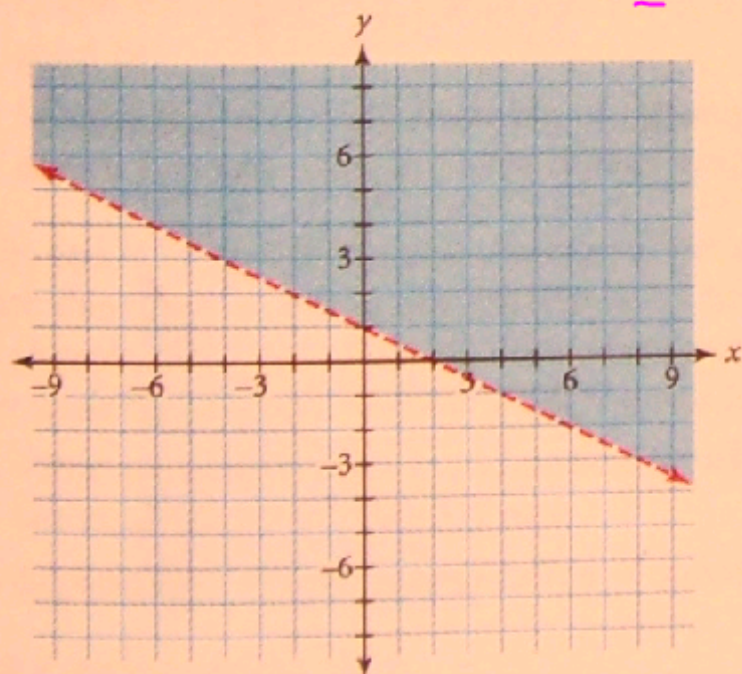


$$y \leq 1 - 2x$$



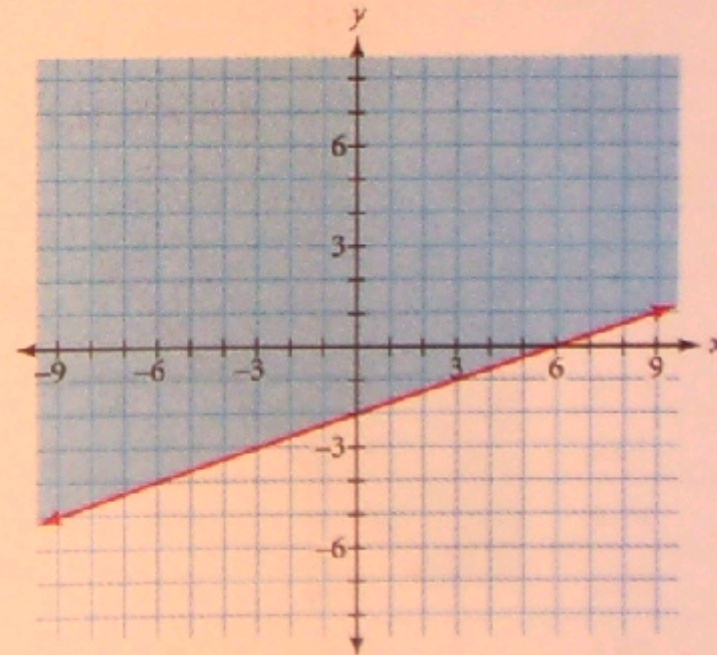
$$y < -2 + \frac{2}{3}x$$

c.



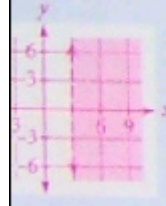
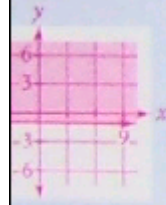
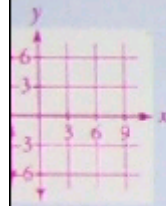
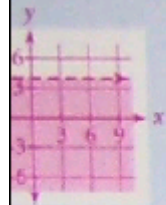
$$y > 1 - 0.5x$$

d.



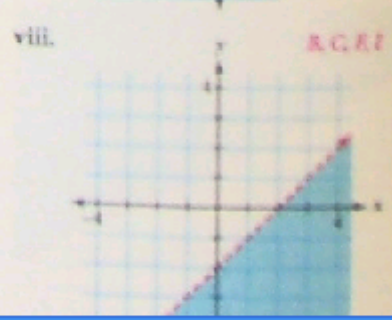
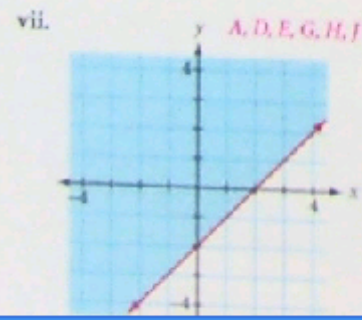
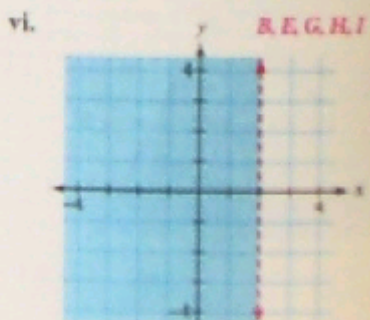
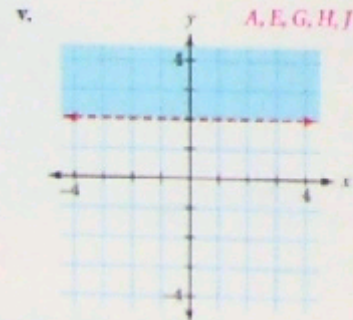
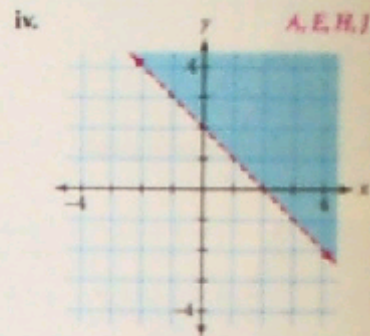
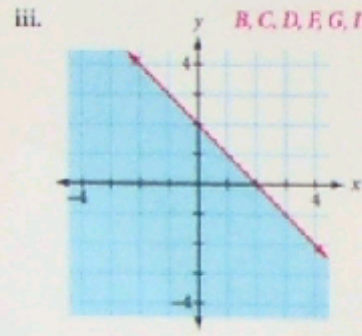
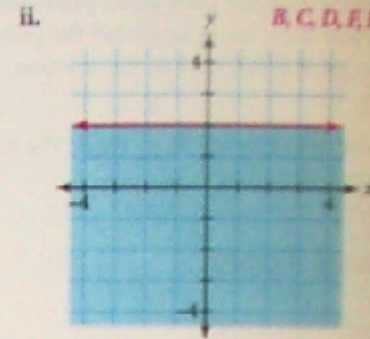
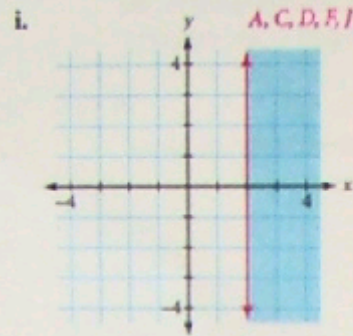
$$y \geq -2 + \frac{1}{3}x$$

that this full exer-
0 checks. You might
only some of the



8. Which of these points lie in the shaded region of each graph?

- | | | | | |
|----------|----------|----------|-----------|----------|
| A(4, 3) | B(1, -2) | C(5, -4) | D(2, 0) | E(0, 5) |
| F(4, -7) | G(-2, 3) | H(1, 8) | I(-1, -4) | J(3, 11) |



10. APPLICATION The total number of one-point free throws, F , and two-point shots, S , made by a player is less than 84 points.

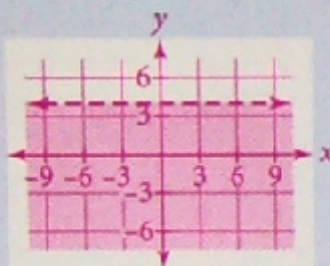
10. Possible answer: (0, 50), (10, 30), (25, 0)
- Write an inequality to represent the situation.
 - Write the equation for the line of best fit.
 - Graph this inequality. Label the horizontal axis as F and the vertical axis as S .
 - On your graph, indicate three possible outcomes for the number of free throws and two-point shots. Name the coordinates of these points.

11. Graph the inequalities in problem 10 on your calculator. See Calculator Notes on your calculator.

Review

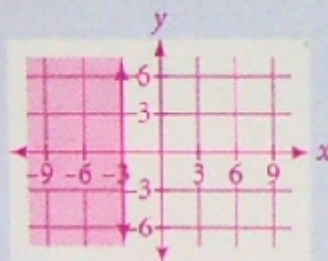
12. In social studies, Zach studies the population of the United States over the past 60 years. He finds this set of data:
- Graph the data from the table. Use one color for minimum wage and one for the dollar value of the minimum wage.
 - Which is better represented by a line: minimum wage or the dollar value of the minimum wage?
 - Find the line of fit based on the points of the form (year, 1998 dollars) modeled by a line. $y = -0.0001x + 1.000$
 - Graph the equation in 12c to see how good a fit it is.
 - What is the real-world meaning of the y-intercept? Does it compare with the 1998 data?
13. Ellie was talking with her grandfather about this summer. Ellie made the trip to the beach at 65 mph. Ellie's grandfather went on the same trip in about 8 hours when he was 75 years old.
- What speed was Ellie's grandfather making the trip? about 27 mph

9a.



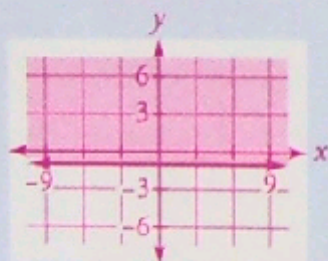
$$y < 4$$

9b.



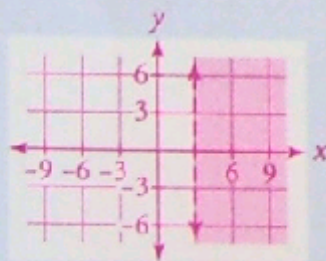
$$x \leq -3$$

9c.



$$y \geq -1$$

9d.



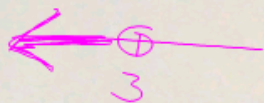
$$x > 3$$

Review of Inequalities

① Solve for x and graph the solution on a number line.

$$\textcircled{a} \quad 3x + 4 < 13$$

$\quad -4 \quad \quad -4$



$$\frac{3x}{3} < \frac{9}{3}$$

$$x < 3$$

$$\textcircled{c} \quad 3 + 5x > 18$$

$\quad -3 \quad \quad -3$



$$\frac{5x}{5} > \frac{15}{5}$$

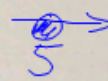
$$x > 3$$

$$\textcircled{b} \quad 5x - 6 \geq 19$$

$\quad +6 \quad \quad +6$

$$\frac{5x}{5} \geq \frac{25}{5}$$

$$x \geq 5$$

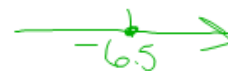


$$\textcircled{d} \quad 4 - 2x \leq 17$$

$\quad -4 \quad \quad -4$

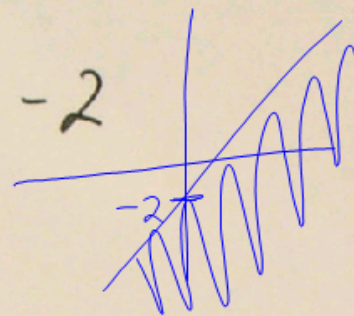
$$\frac{-2x}{-2} \leq \frac{13}{-2}$$

$$x \geq -6.5$$

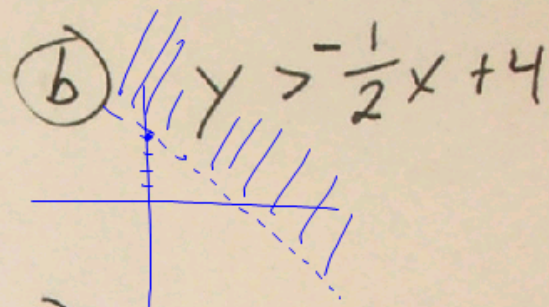


2) solve for y if necessary and graph.

a) $y \leq 3x - 2$



b) $y > -\frac{1}{2}x + 4$



c) $3x + 2y \geq 6$

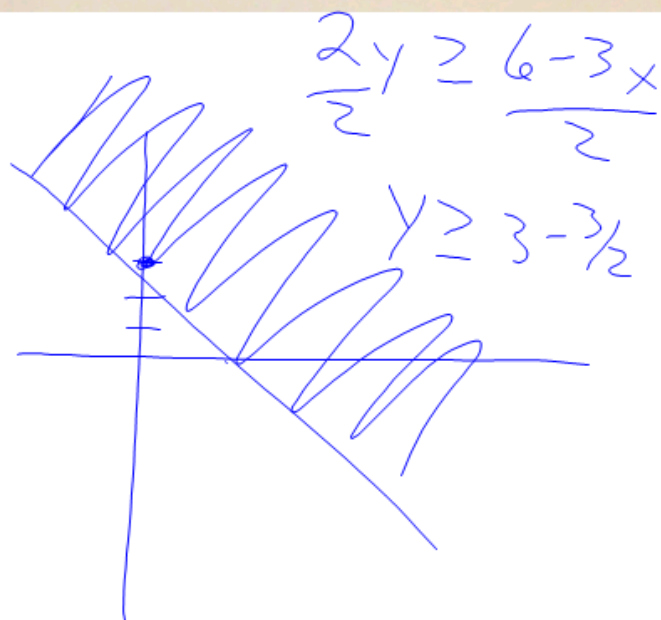
$-3x$ $-3x$

d) $4x - 2y < 8$

$-4x$ $-4x$

$\frac{2y}{2} \geq \frac{6-3x}{2}$

$y \geq 3 - \frac{3}{2}x$



$\frac{-2y}{-2} < \frac{8-4x}{-2}$

$y > -4 + 2x$

